FIG.1

PROGRAM TABLE		
11/20	100ch	101ch	102ch
18			
19			
20			

99

400

300

200

106
102
105
100
101
103
104

FIG.2

PROGRAM SELECTING APPARATUS — 200

PROGRAM RECEIVING AND RECORDING APPARATUS — 300

REMOTE CONTROL APPARATUS — 100

INFRARED RAY COMMUNICATING UNIT — 111

PROGRAM INFORMATION RECEIVING UNIT — 131

PROGRAM INFORMATION STORING UNIT — 132

DISPLAYING UNIT — 140

TYPE INFORMATION STORING UNIT — 150

IDENTIFYING UNIT — 161

ORGANIZING UNIT — 164

SIGNAL FORMAT SPECIFYING UNIT — 162

ITEM SPECIFYING UNIT — 163

FORWARDING UNIT — 160

REQUESTING UNIT — 122

SELECTING UNIT — 121

OPERATION RECEIVING UNIT — 110

USER OPERATION

FIG.3

PROGRAM SELECTING APPARATUS 200

ANTENNA → PROGRAM INFORMATION RECEIVING UNIT 210

PROGRAM INFORMATION MANAGING UNIT 220

DISPLAYING UNIT 230

PROGRAM INFORMATION TRANSMITTING UNIT 250

PGORAM SELECTING UNIT 240

INFRARED RAY COMMUNICATING UNIT 201

PROGRAM INFORMATION →

REQUEST SIGNAL

SELECTIVE SIGNAL

FIG.4

FROM
ANTENNA

FIG.5

PROGRAM INFORMATION	STARTING AND ENDING TIMES	CHANNEL	PROGRAM NAME	PROGRAM DESCRIPTION	GENRE	⋯
BROADCAST DATE						
11/20	19：00～20：00	102	News 7	NEWS AND COMMENTS	NEWS	⋯

510 511 512 513 514 515 516

FIG.6

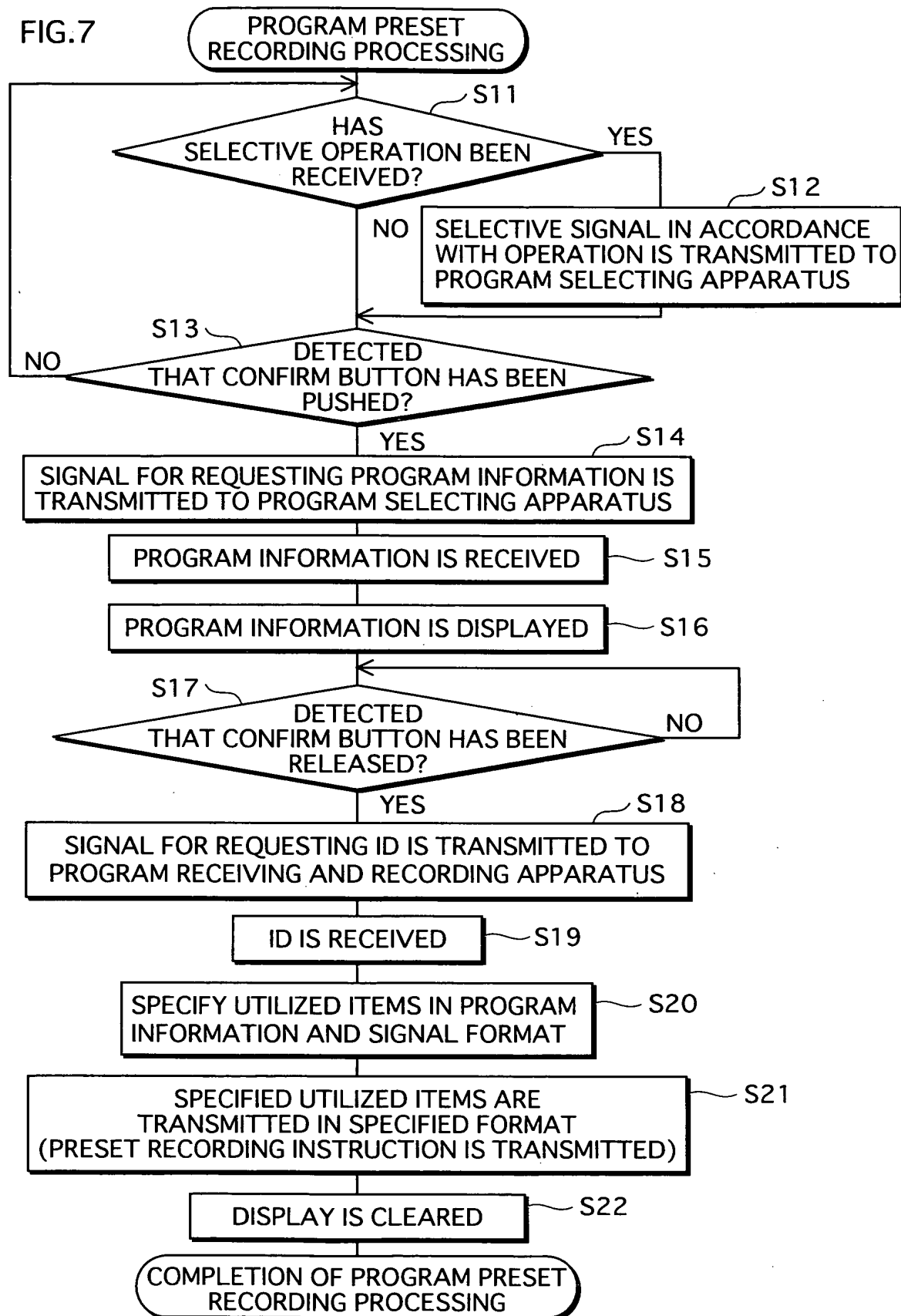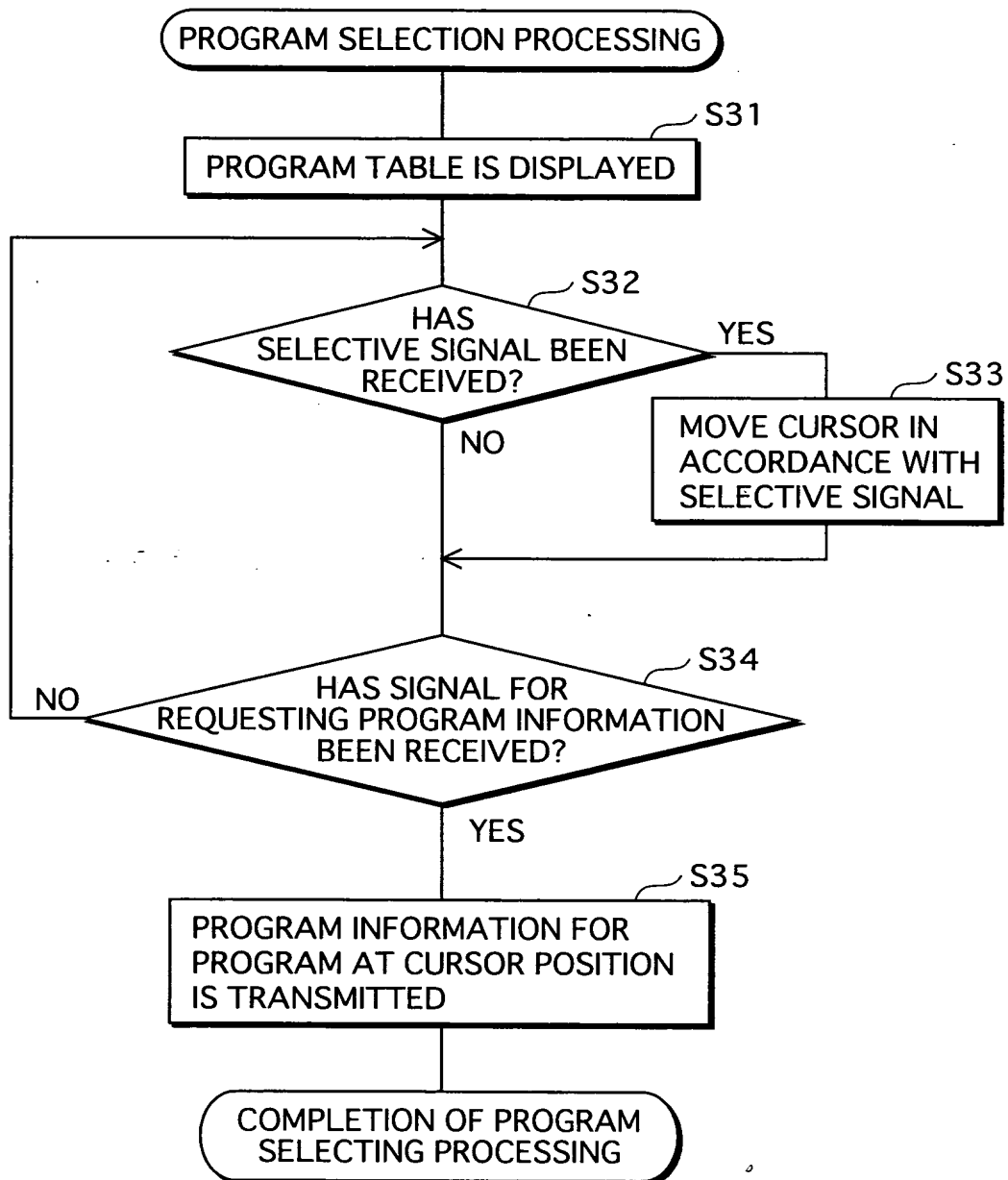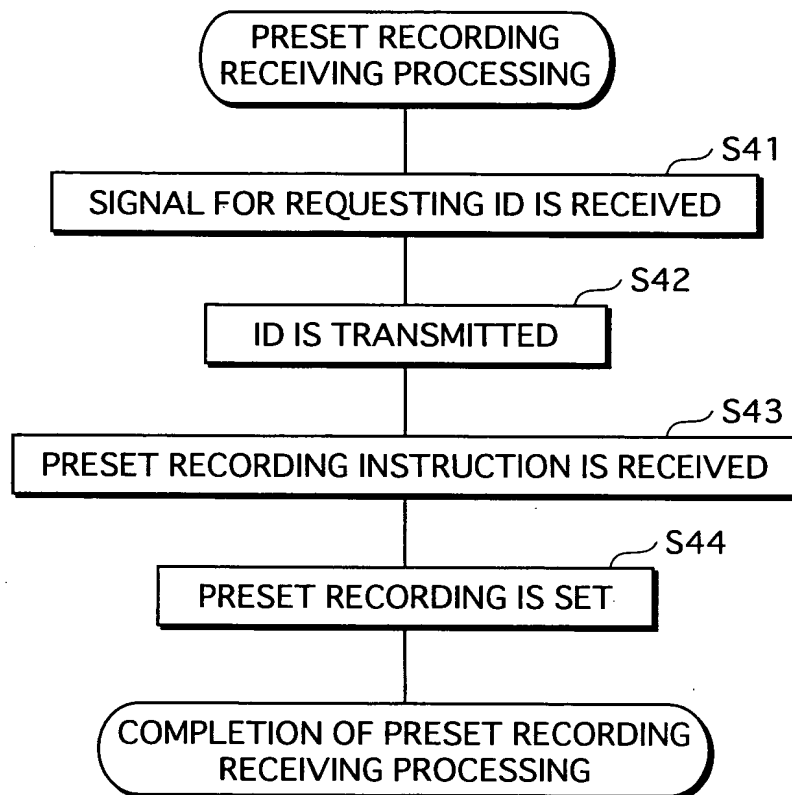| TYPE INFORMATION		
ID	UTILIZED ITEM INFORMATION	SIGNAL FORMAT INFORMATION
001	BROADCAST DATE, STARTING AND ENDING TIMES, CHANNEL	LEADER PULSE PATTERN=XXX, TRAILER PULSE PATTERN=XXXX, MAKER CODE=XX, · · · · ·
002	BROADCAST DATE, STARTING AND ENDING TIMES, CHANNEL, PROGRAM NAME, GENRE	LEADER PULSE PATTERN=OOO, TRAILER PULSE PATTERN=OOOO, MAKER CODE=OO, · · · · ·
	· · ·	· · ·

520

521

522

523

FIG.7

```
      ( PROGRAM PRESET
        RECORDING PROCESSING )
              │
              ▼
         ┌─────────────────────┐  S11
         │        HAS          │      YES
◄────────┤ SELECTIVE OPERATION BEEN ├──────────┐
│        │      RECEIVED?      │                │
│        └─────────────────────┘                ▼
│              NO     ┌──────────────────────────────────┐ S12
│                     │ SELECTIVE SIGNAL IN ACCORDANCE    │
│                     │ WITH OPERATION IS TRANSMITTED TO  │
│                     │ PROGRAM SELECTING APPARATUS       │
│                     └──────────────────────────────────┘
│       S13                   │
│        ┌─────────────────────┐◄──────────────┘
│  NO    │      DETECTED       │
└────────┤ THAT CONFIRM BUTTON HAS BEEN │
         │       PUSHED?       │
         └─────────────────────┘
              YES     S14
         ┌──────────────────────────────────────────┐
         │ SIGNAL FOR REQUESTING PROGRAM INFORMATION IS │
         │ TRANSMITTED TO PROGRAM SELECTING APPARATUS   │
         └──────────────────────────────────────────┘
              │
         ┌──────────────────────────────────┐  S15
         │ PROGRAM INFORMATION IS RECEIVED   │
         └──────────────────────────────────┘
              │
         ┌──────────────────────────────────┐  S16
         │ PROGRAM INFORMATION IS DISPLAYED  │
         └──────────────────────────────────┘
       S17                   │◄──────────────┐
         ┌─────────────────────┐              │
         │      DETECTED       │      NO       │
         │ THAT CONFIRM BUTTON HAS BEEN ├───────┘
         │      RELEASED?      │
         └─────────────────────┘
              YES     S18
         ┌──────────────────────────────────────────┐
         │ SIGNAL FOR REQUESTING ID IS TRANSMITTED TO   │
         │ PROGRAM RECEIVING AND RECORDING APPARATUS    │
         └──────────────────────────────────────────┘
              │
         ┌──────────────────────┐  S19
         │   ID IS RECEIVED      │
         └──────────────────────┘
              │
         ┌──────────────────────────────────┐  S20
         │ SPECIFY UTILIZED ITEMS IN PROGRAM │
         │ INFORMATION AND SIGNAL FORMAT     │
         └──────────────────────────────────┘
              │
         ┌──────────────────────────────────────────┐  S21
         │       SPECIFIED UTILIZED ITEMS ARE          │
         │     TRANSMITTED IN SPECIFIED FORMAT         │
         │ (PRESET RECORDING INSTRUCTION IS TRANSMITTED)│
         └──────────────────────────────────────────┘
              │
         ┌──────────────────────┐  S22
         │   DISPLAY IS CLEARED  │
         └──────────────────────┘
              │
        ( COMPLETION OF PROGRAM PRESET
          RECORDING PROCESSING )
```

FIG.8

$$\text{PROGRAM SELECTION PROCESSING}$$

S31
PROGRAM TABLE IS DISPLAYED

S32
HAS
SELECTIVE SIGNAL BEEN
RECEIVED?

YES

NO

S33
MOVE CURSOR IN
ACCORDANCE WITH
SELECTIVE SIGNAL

S34
HAS SIGNAL FOR
REQUESTING PROGRAM INFORMATION
BEEN RECEIVED?

NO

YES

S35
PROGRAM INFORMATION FOR
PROGRAM AT CURSOR POSITION
IS TRANSMITTED

COMPLETION OF PROGRAM
SELECTING PROCESSING

FIG.9

```
       ┌─────────────────────────┐
       │   PRESET RECORDING       │
       │  RECEIVING PROCESSING    │
       └─────────────────────────┘
                    │
                    │            S41
 ┌──────────────────────────────────────┐
 │  SIGNAL FOR REQUESTING ID IS RECEIVED │
 └──────────────────────────────────────┘
                    │
                    │            S42
        ┌───────────────────────┐
        │    ID IS TRANSMITTED   │
        └───────────────────────┘
                    │
                    │            S43
 ┌──────────────────────────────────────────┐
 │ PRESET RECORDING INSTRUCTION IS RECEIVED  │
 └──────────────────────────────────────────┘
                    │
                    │            S44
      ┌───────────────────────────┐
      │  PRESET RECORDING IS SET   │
      └───────────────────────────┘
                    │
       ┌─────────────────────────────────┐
       │ COMPLETION OF PRESET RECORDING  │
       │     RECEIVING PROCESSING        │
       └─────────────────────────────────┘
```

FIG.10

106

INFORMATION FOR PRESET RECORDING IS READY TO BE FORWARDED

11/20　19：00→20：00　102ch

FIG.11

FIG.12

FROM REMOTE CONTROL APPARATUS

1300

INFRARED RAY RECEIVING UNIT 1301

PROGRAM RELATED INFORMATION OBTAINING UNIT 320

PRESET RECORDING UNIT 330

FROM ANTENNA

PROGRAM RECEIVING AND RECORDING APPARATUS

FIG.13

PROGRAM
INFORMATION

1510

BROADCAST DATE	STARTING AND ENDING TIMES	CHANNEL	PROGRAM NAME	PROGRAM DESCRIPTION	GENRE	⋯
11/20	19 : 00~20 : 00	102	News 7	NEWS AND COMMENTS	NEWS	⋯
11/20	19 : 00~20 : 00	102	TV SERIAL MYSTERY STORIES	THE 4TH EPISODE	DRAMA	⋯
11/20	22 : 00~23 : 00	101	20 BEST HITS OF THE WEEK	PROMOTION FILM AND LIVE PERFORMANCE	MUSIC	⋯
⋯	⋯	⋯	⋯	⋯	⋯	⋯

FIG.14

PROGRAM PRESET
RECORDING PROCESSING

S61

HAS
SELECTIVE OPERATION BEEN
RECEIVED?

YES

NO

S62

SELECTIVE SIGNAL IN ACCORDANCE
WITH OPERATION IS TRANSMITTED TO
PROGRAM SELECTING APPARATUS

S63

HAS
CONFIRM OPERATION BEEN
RECEIVED?

YES

NO

S64

SIGNAL FOR REQUESTING PROGRAM
INFORMATION IS TRANSMITTED TO
PROGRAM SELECTING APPARATUS

S65

PROGRAM INFORMATION IS
RECEIVED AND STORED

S66

HAS
FORWARDING OPERATION
BEEN RECEIVED?

YES

NO

S67

OPTIONS ARE DISPLAYED AND
SELECTION OF PROGRAM IS RECEIVED

S68

PRESET RECORDING INSTRUCTION FOR
SELECTED PROGRAM IS TRANSMITTED

S69

DELETE PROGRAM INFORMATION
OF SELECTED PROGRAM

14/15

FIG.15

SELECT PRESET RECORDING INFORMATION TO BE FORWARDED

1. 11/20   19 : 00 → 20 : 00   102ch
    News 7

2. 11/20   19 : 30 → 20 : 00   100ch
    TV SERIAL MYSTERY STORIES

3. 11/20   22 : 00 → 23 : 00   101ch
    20 BEST HITS OF THE WEEK